

REMARKS

In accordance with the foregoing, claims 1 and 5 are amended. Claims 1-8 are pending and under consideration. Reconsideration is requested.

ENTRY OF AMENDMENT UNDER 37 CFR §1.116

Applicants requests entry of this Rule 116 Response because it is believed that the amendment of claims 1 and 5 puts this application into condition for allowance and should not entail any further search by the Examiner since no new features are being added and no new issues are being raised.

Claim 1 is amended to replace the term "those" with the phrase --the respective heat expansion coefficients--, and to replace the phrase "the thermal stress" with --thermal stress--, to establish proper antecedent basis. Claim 5 is similarly amended.

Claim 1 is also amended to correct the grammar and replace the term "thereby" with the term --and--.

ITEM 2: REJECTION OF CLAIMS 1-8 UNDER 35 U.S.C. §102(e) AS BEING ANTICIPATED BY ABE (U.S. PUB 2003/1036577)

The rejections are traversed.

As set forth in MPEP §706.02 entitled Rejection on Prior Art, anticipation requires that the reference must teach every aspect of a claimed invention.

Applicants respectfully submit that Abe does not support an anticipatory-type rejection by not describing features recited in the present application's independent claims.

Specific Characteristics Of Resin Layers As Claimed Not Disclosed By Abe

Claim 1 recites a semiconductor device substrate comprised of a core substrate on both main surfaces of which interconnect patterns are formed via resin layers, wherein: "... a resin layer, forming an outermost layer of the substrate on each of the main surfaces thereof, of a material having at least one of a higher strength and a higher elongation than a resin material used for inner resin layers in the substrate, and preventing cracking, deformation, and other problems arising in the substrate due to thermal stress occurring between the core substrate and the inner resin layers and interconnect patterns in the substrate (emphasis added)."

Claim 5 has a similar recitation.

That is, according to independent claims 1 and 5, the specific characteristics of strength and/or elongation of the outermost resin layer are different from the specific characteristics of strength and/or elongation of the inner resin layer.

Abe does not teach that the specific characteristics of strength and/or elongation are different respectively for an outermost resin layer and inner resin layer.

To the contrary, Abe teaches that the outermost and inner resin layers are the same. Specifically, Abe discloses:

The overcoat layer 30 can be formed of a resin, as [a member] of [the] . . . polyimide group.

and:

The resin material forming the insulating layer 14 is suitably . . . [a - sic] . . . polyimide resin.

(See, Abe paragraphs [0045] and [0063]).

Dependent claims 2-4 and 6-8 depend from claims 1 and 5 respectively and inherit their respective patentable recitations.

Examiner's Support For Rejection Does Not Address Claimed Specific Characteristics

Applicants respectfully point out that in support of the rejection, the Examiner merely generalizes, when comparing materials disclosed by Abe and materials discussed in the present application. Particularly, in item 3 of the Office Action, entitled Response To Arguments, the Examiner contends:

[T]he materials (polyimide based and/or epoxy based) select [-ed...sic] for the resin layers in Table 1 of Abe have the same characteristics as those disclosed on page 8 of the present invention application, because they are essentially the same materials.

(Action at page 4; emphasis added).

However, the Examiner does not cite any teaching in Abe as to the specific characteristics of strength and/or elongation of the outermost resin layer in relation to the characterization of an inner resin layer, as recited in claims 1 and 5.

Applicants respectfully rebut the Examiner's statement and point out that Abe merely discloses in Table 1 generalized properties of materials including polyimide resins having a range of thermal expansion coefficients of 4-100 ppm/^oC.

Further, Table 1 of Abe does not address the specific characteristic of strengths of resins.

By contrast, Table 1 on page 8 of the present application addresses both the specific characteristic of strength of resins and the specific characteristic of elongation.

Accordingly, the Examiner's contention that Table 1 of Abe and page 8 of the present application are "the same materials" is but a vague generalization, and does not provide support for the rejection of claims 1 and 5.

Summary

Since features recited by independent claims 1 and 5 (and respective dependent claims 2-4 and 6-8) recite features not taught by Abe, the rejection should be withdrawn and claim 1-8 allowed.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

If there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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